REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claims 12-16 have been cancelled. The remaining claims have been amended responsive to the claim objection and the rejection under 35 U.S.C. §112, and have otherwise been amended for clarity. As such, Claim 1 now clearly recites that only one of the conditions must be satisfied. It is noted that this is consistent with the interpretation underlying the Office Action.

According to a feature of the invention set forth in the claims, a power transmission chain having a plurality of links, as well as first and second pins inserted in the links, is characterized by a margin between the pins and the insertion parts of the links being in the range of 0.005 mm to 0.1 mm. Alternatively, the maximum tensile strength in a periphery of the insertion part after fitting is not more than 1,000 MPa, or the stress in the periphery of the insertion part after fitting is 3-80% of the elastic limit. It has been found that, in contrast to conventional chains in which the effect of fitting conditions on power transmission have not been considered, fitting conditions within the claimed ranges makes it possible to improve the strength and reliability of the link (page 8, lines 9-14). That is, Applicants have not only determined critical ranges of the fitting conditions, but have also discovered that the fitting conditions are "result effective variables" for improving the strength and reliability of power transmission in the link. See M.P.E.P. §2144.05(II)(B).

Claims 1-4 and 11 were rejected under 35 U.S.C. §103 as being obvious over U.S. patent 5,728,021 (Van Rooij et al) in view of U.S. patent 6,969,332 (Sakamoto et al). However, this rejection is respectfully traversed.

Van Rooij et al discloses a transmission chain corresponding to that described in Japanese patent publication 8-312725 discussed on pages 2 and 3 of the present specification. As such, it comprises a chain having the claimed plurality of links, and first and second pins.

However, as the Office Action has noted, it fails to teach the claimed fitting conditions including the claimed clearance, tensile stress and stress in the periphery of the insertion part.

Sakamoto et al discloses a chain wherein the pin clearance is at least 0.2 mm (col. 6, lines 18-22), which is at least *twice* the claimed range of 0.005 mm to 0.1 mm.

According to the Office Action, it would have been obvious in view of Sakamoto et al to modify the transmission chain of van Rooij et al to include the claimed fitting difference dimension. However, *since Sakamoto et al does not teach the claimed dimension difference*, this portion of the rejection is respectfully traversed.

Alternatively, it was the position of the Office Action that "although ranges do not overlap, a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties." However, the Office Action fails to set forth a *prima facie* case of obviousness on this basis, both because the clearance taught in Sakamoto et al is not close to the claimed range -- it is at least twice the maximum value of the claimed range -- and because no evidence has been proffered tending to show that one skilled in the art would have expected Sakamoto et al to have the same properties if the disclosed clearance were reduced by more than one half. Indeed, Sakamoto et al teaches the *opposite*: that it is "preferable" that the clearance be even greater than 0.2 mm (column 6, line 20).

Finally, the Office Action considers the claimed invention to have been obvious as the discovery of an optimum range by routine experimentation. M.P.E.P. §2144.05(II)(A). However, it is noted that the "discovery of an optimum range by routine experimentation" rule is limited to the case where the prior art teaches that the parameter to be optimized is recognized in the art as a result effective variable. M.P.E.P. §2144.05(II)(B); see also In re Antonie, 195 USPQ 6 (CCPA 1977). Here, on the other hand, it was Applicants who discovered that the claimed fitting conditions are result effective parameters for improving

the strength and reliability of power transmission in the link, and so this failure of the prior art cannot be simply dismissed as the result of routine experimentation.

In view of the shortcomings of the prior art cited against Claim 1, Van Rooij et al and Sakamoto et al fail to render obvious the subject matter of Claim 1, as well as Claims 2-4 and 11, which depend therefrom.

Dependent Claims 5-7 were rejected under 35 U.S.C. §103 as being obvious over Van Rooij et al in view of U.S. patent 2,844,042 (Mercier) and Sakamoto et al. Similarly, dependent Claims 8-10 were rejected under 35 U.S.C. §103 as being obvious over Van Rooij et al in view of U.S. patent 6,006,514 (Forster) and Sakamoto et al. In each case, however, the additional references were cited to teach features of the dependent claims, and there is no evidence that they overcome the shortcomings of van Rooij et al and Sakamoto et al with respect to Claim 1 from which these claims depend, and so the claims are also believed to define over this prior art.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early notice of allowability.

Respectfully submitted,

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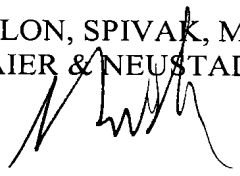

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